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AN ASSESSMENT OF INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS [IMCI] SCREENING FOR AIDS BASED ON WHO CRITERIA AND MODIFICATIONS USING A RETROSPECTIVE REVIEW OF PAEDIATRIC CASE RECORDS FROM EDENVALE HOSPITAL

Thein Win

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg in partial fulfilment of the requirements for the degree of Master of Science in Medicine in the field of Child Health.

Johannesburg, 2006

DECLARATION

I, Thein Win declare that this research report is my own work except to the extent indicated in the reference citations and acknowledgements. It is being submitted for the degree of Master of Science in Medicine in the field of Child Health, to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination at this or any other Universities.

The Ethics Committee on Human Research, University of Witwatersrand approved the study unconditionally. The medical ethics clearance certificate number is M02-04-32 (5 May 2002).

(Thein Win)

9 May 2006

DEDICATION

To my late mother, Daw Kyi Kyi.

To my family, Theingi Aung and two sons, Win Htoo Aung and Win Myint Aung with thanks for not worrying about all the hours spent away from them.

To Nobel Peace Laureate, Daw Aung San Suu Kyi, non-violent freedom fighter of Burma who has given me moral inspiration.

ABSTRACT

The study aimed to evaluate IMCI guidelines, developed to assess children with Suspected Symptomatic HIV [SSHIV] as a screening tool for AIDS.

OBJECTIVES

1. To look at the agreement between IMCI classification for SSHIV and WHO clinical case definition for AIDS using a retrospective record review of the same hospitalised children.
2. To determine the sensitivity, specificity, positive predictive values and likelihood ratios of the IMCI SSHIV criteria (Guidelines 2001), WHO clinical case definition for paediatric AIDS and Bloemfontein Proposed simplified case definition for paediatric SSHIV, using HIV ELISA results in children older than 15 months as a gold standard.

METHODS

The study involved 304 children in the IMCI age range who were admitted to the Edenvale Hospital during the study period and who met all the inclusion and exclusion criteria. These children were assessed with IMCI criteria and WHO criteria for AIDS. [Objective 1]

The findings of 50 children above 15 months of age with ELISA results were compared using 3 sets of criteria. [IMCI, WHO and Bloemfontein proposed simplified case definition for paediatric SSHIV] [Objective 2]

FINDINGS

IMCI and WHO criteria for AIDS were the same in 158 [52%] of the 304 children. Almost all [22 out of 23 children] with WHO criteria for AIDS were also classified by IMCI criteria as Suspected Symptomatic HIV. [Objective 1]

IMCI criteria had the highest sensitivity [85.7%], while WHO criteria had the highest specificity [88%] based on ELISA results. [Objective 2]

CONCLUSION

Based on the above findings, IMCI criteria could be considered as a screening tool to select children aged 15 months and above for appropriate laboratory investigation for HIV infection confirmation in remote areas. WHO criteria for AIDS could be considered for exclusion of AIDS in children aged 15 months and above in remote areas where laboratory facilities are not available.

In this study, reliable findings could not be obtained in children younger than 15 months.

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ETHICS COMMITTEE CLEARANCE CERTIFICATE

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

COMMITTEE FOR RESEARCH ON HUMAN SUBJECTS (MEDICAL)
Ref: R14/48 Win

CLEARANCE CERTIFICATE **PROTOCOL NUMBER** M02-04-32

PROJECT To Assess & Compare Suggestive Features of Human Immunodeficiency Virus Infection And Tuberculosis According To Integrated Management of Childhood Illness (IMCI)) Criteria With Hospital Diagnosis

INVESTIGATORS Dr T Win

DEPARTMENT School of Public Health, Wits Medical School

DATE CONSIDERED 02-04-05

DECISION OF THE COMMITTEE *

Approved unconditionally

DATE 02-05-20 **CHAIRMAN** .....(Professor P E Cleaton-Jones)

* Guidelines for written "informed consent" attached where applicable.

c c Supervisor: Prof LA Wagstaff
Dept of School of Public Health, Wits Medical School

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DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10001, 10th Floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with those conditions. Should any departure to be

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

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ABBREVIATIONS

AFRO	-	Africa Regional Office
AIDS	-	Acquired Immunodeficiency Syndrome
CAH	-	The Department of Child and Adolescent Health and Development
ELISA	-	Enzyme Linked Immuno-Sorbent Antibody
HIV	-	Human Immunodeficiency Virus
IMCI	-	Integrated Management of Childhood Illness
LR	-	Likelihood Ratios
PCR	-	Polymerase Chain Reaction
PEM	-	Protein Energy Malnutrition
PMTCT	-	Prevention of Mother to Child Transmission
PPV	-	Positive Predictive Value
RTHC	-	Road to Health Card
SSHIV	-	Suspected Symptomatic HIV
UNAIDS	-	United Nations Programme on AIDS
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization